SYLLABLE

AS A PHONETIC AND PHONOLOGICAL UNIT

TERMINOLOGY

Syllable
Initially / Finally Strong Consonants
Double-Peaked Consonants
Articulatory Transitions
Juncture
Sonority

01

Introduction

SYLLABLE

Greek “syllabḗ”

‘something taken together’

syn	labein
‘together’	‘take’

the smallest pronunciation (articulatory) unit

the alternation of openings and closings

the alternation of increases and decreases in articulatory tension

the smallest perceptible unit

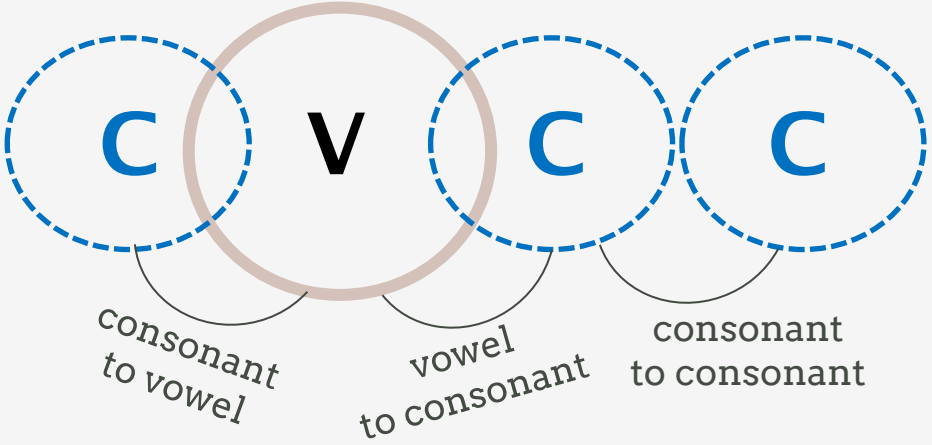
Lyudmila V. Borissova,
Anna A. Metlyuk

SYLLABLE

a structural unit, which consists of a vowel alone or of a vowel (or a syllabic sonorant) surrounded by consonants in the numbers and arrangements permitted by a given language

Lyudmila V. Borissova,
Anna A. Metlyuk

ARTICULATORY TRANSITION



seems
pact

/s i: m z/
/p æ k t/

CV TRANSITIONS

VC TRANSITIONS

loose

close

the voiceless plosives /p/, /t/, /k/ before stressed vowels are aspirated

/plʌm–paɪ/
plum pie

no aspiration

/pɒz–ɪ–tɪv/
positive

/plʌmp–aɪ/
plump eye

SYLLABLES PHONOLOGICALLY

one particular language

take, get

kpo, fsple

02

Phonetic Aspect of the Syllable

EXPIRATORY CHEST PULSE THEORY

A sound or a group of sounds that are pronounced in one chest pulse, accompanied by increases in air pressure.

juxtaposed vowels

/si:-ɪŋ/ *seeing*

Alfred C. Gimson

RELATIVE SONORITY THEORY

PROMINENCE THEORY

Sounds are grouped around the most sonorous ones, i.e. vowels (and sometimes sonants) which form the peak of sonority in a syllable

Otto Jespersen

1 PEAK

/mɛlt/ *melt*

2 PEAKS

/mɛ-tl/ *metal*

DEGREE OF SONORITY

Open vowels /æ/, /ɒ/, /ɑ:/, /ɔ:/
Mid-open vowels /ɛ/, /ɜ:/, /ə/, /ʌ/
Close vowels /i:/, /ɪ/, /ʊ/, /u:/
Sonants /r/, /l/, /m/, /n/, /ŋ/, /w/, /j/
Voiced fricatives /v/, /ð/, /z/, /ʒ/
Voiced stops /b/, /d/, /g/
Voiceless fricatives /f/, /θ/, /s/, /ʃ/
Voiceless stops /p/, /t/, /k/

prominence, audibility or carrying power

MUSCULAR TENSION THEORY

ARTICULATORY EFFORT THEORY

The energy of articulation increases at the beginning of a syllable, reaches its maximum with the vowel (or the sonant) and decreases towards the end of the syllable.

Lev V. Shcherba

ARC OF MUSCULAR TENSION

/tɑ͡ː/ *tar*

/tɑ͡ː/ *tower*
(reduced)

INITIALLY STRONG CONSONANTS

beginning end
stronger weaker

/ɪt/
/ʌs/
/pɪn/
/sæd/
/pɑ:t/

FINALLY STRONG CONSONANTS

/maɪ/
/taɪ/
/pɑ:t/
/sæd/

beginning end
weaker stronger

DOUBLE—PEAKED CONSONANTS

beginning middle end
stronger weaker stronger

/pɛn.naɪf/
/ðæt.taɪm/
/mɪd.deɪ/

03

Phonological Aspect of the Syllable

VOWELS

Syllabic and occupy a central position in the syllable

CONSONANTS

Non-syllabic and marginal

SONORANTS

/w/, /r/, /j/

occur only before the vowel, non-syllabic

/'win–tə/ *winter*
/ri:–də/ *reader*
/jɑ:d/ *yard*

/l/, /m/, /n/

non-syllabic
in various sound combinations before a vowel

BUT

syllabic
in unstressed final position preceded by a noise consonant

/pɛ–tl/ *petal*
/blɒ–sm/ *blossom*
/laɪ–tn/ *lighten*

STRESSED FINAL POSITION

/ɛ/,/æ/,/ʌ/,/ɒ/,/ʊ/

historically short vowels never occur in stressed final position without the following consonant

*c**a**t*, *p**e**t*, *l**o**ck*, *f**oo**t*, etc.

UNSTRESSED FINAL POSITION

/ɪ/,/ə/

can occur as final

mini, *leader*

POSITIONS OF CONSONANTS

Open Syllables	Closed Syllables	Covered Syllables	Uncovered Syllables
CV	VC or CVC	CVC	VC or CV
/fa:/ *far*	/ɑ:t/ *art*	/laɪk/ like	/æpt/ apt
/taɪ/ *tie*	/sɪt/ *sit*		/i:t/ eat
/si:/*sea*	/laɪf/ *life*		/sɔ:/ saw

CLUSTERS OF SEGMENTS POSITIONS OF CONSONANTS

V, VC, CVC, CV, CCVC, CCVCC, CCCVC, CCCVCC, etc.

BUT

no consonant combinations are possible with
/ð/, /tʃ/, /dʒ/

SYLLABIC DIVISION (1)

English historically short vowels under stress (checked vowels), which are always followed by a consonant, occur only in a closed syllable.

quickly
/kwɪk–lɪ/

hotly
/hɒt–lɪ/

goodness
/gʊd–nɪs/

Lyudmila V. Borissova,
Anna A. Metlyuk

SYLLABIC DIVISION (2)

If a checked vowel is separated by one consonant from a syllabic sonant the boundary between the two syllables is also within the consonant.

little
/lɪ–tl/

cotton
/kɒ–tn/

rhythm
/rɪ–ðm/

SYLLABIC DIVISION (3)

Historically long monophthongs, diphthongs and unstressed short monophthongs (free vowels) can occur both in the open and in the closed syllable.

car
/kɑ:/

cart
/kɑ:t/

tiny
/taɪ–nɪ/

SYLLABIC DIVISION (4)

When a free vowel is separated from a succeeding vowel by only one consonant sound, the syllable in which such a vowel occurs is always open.

idea
/aɪ-dɪə/

cartoon
/kɑ:-'tu:n/

erect
/ɪ-'rɛkt/

SYLLABIC DIVISION (5)

When a post-stressed short vowel is separated from a succeeding vowel by a single consonant, the boundary is most probably, before the consonant.

family
/'fæm–ɪ–lɪ/

policy
/'pɒl–ɪ–sɪ/

possibility
/pɒs–ɪ–'bɪl–ɪ–tɪ/

SYLLABIC DIVISION (6)

When there is a cluster of consonants between two vowels, the place of the syllabic boundary is conditioned by whether this cluster is permitted at the beginning of words or not.

agree
/ə–gri:/

regret
/rɪ–'grɛt/

SYLLABIC DIVISION (7)

/dm/, /dv/
do not occur initially and cannot occur at the beginning of a syllable

the syllabic boundary is between the consonants constituting the clusters

admit
/əd–mɪt/

admire
/əd–'maɪə/

advice
/əd–vaɪs/

admission
/əd–'mɪʃn/

SYLLABIC DIVISION (8)

When two vowels are separated by more than two consonants the boundary may be both before /s/ and /t/ because both /str/ and /tr/ occur at the beginning of words and /ks/ can occur in final position.

extra
/ɛk(–)s(–)trə/

SYLLABIC DIVISION (9)

triphthongs

disyllabic

science
/'saɪ–ənts/

flower
/'flaʊ–ə/

vowel
/'vaʊ–əl/

SYLLABIC BOUNDARY

JUNCTURE PHONEME
a separate phonological unit

OPEN JUNCTURE
(Open Transition)

intersyllabic juncture

between syllables

/wɪl–əʊn/ *we'll own*

CLOSE JUNCTURE
(Close Transition)

intersyllabic juncture

between sounds within one syllable,
i.e. within one articulatory unit

/wɪ–ləʊn/ *we loan*

04

Functions

CONSTITUTIVE FUNCTION

higher-level units

words, accentual or rhythmic groups, utterances

DELIMITATIVE FUNCTION

DISTINCTIVE FUNCTION

differentiating of words and word combinations

/naɪ–treɪt/ *nitrate* — /naɪt–reɪt/ *night-rate*
/ə–neɪm/ *a name* — /ən–eɪm/ *an aim*
/wɪl–əun/ *we'll own* — /wɪ–ləʊn/ *we loan*
/aɪ–skri:m/ *I scream* — /aɪs–kri:m/ *ice cream*

/aɪ–sɔ:–hər–aɪz/ *I saw her eyes*—
/aɪ–sɔ:–hə–raɪz/ *I saw her rise*

Vyacheslav A. Vassilyev

IDENTIFICATION

hearer's perception of syllables as entire phonetic units with their concrete allophones and syllabic boundaries

/naɪ–treɪt/ *nitrate* — /naɪt–reɪt/ *night-rate*
/ə–neɪm/ *a name* — /ən–eɪm/ *an aim/*

Picture from:
https://www.hearinglink.org/your-hearing/causes-hearing-loss/#lightbox/0/

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